

PRODUCT DATA SHEET

ART-JA

Hardening Accelerating Type High Performance Water Reducing Admixture

Description

ART-JA is a high-performance polycarboxylate superplasticizer of early strength type independently developed by ARIT. It is characterized by high early strength, high water reduction rate, and excellent workability of concrete. It rapidly enhances the early-age strength and freeze resistance of concrete, shortens the construction period, and improves the turnover efficiency of molds.

Main benefits/Characteristics

- **Excellent Early Strength Effect:** Significantly reduces the concrete setting time by 2 - 8 hours; increases 1-day strength by 80% and 28-day strength by 30%.
- **High Water Reduction Rate:** Achieves a water reduction rate of over 25%.
- **Low Air Content:** The air content in concrete is less than 2%, which enhances density and durability.
- **Excellent adaptability:** Compatible with most cements, mineral admixtures, and various aggregate types available on the market.
- **Environmental Friendliness:** Non-corrosive to steel, non-toxic, non-flammable, non-explosive, and pollution-free.

Applications

- Precast Concrete
- Prestressed Concrete
- Steam-Cured Concrete
- Low-Temperature Construction Concrete

Physical and chemical indicators

Items	Performance
Appearance	Light yellow transparent liquid
Solid content/%	Adjusted for on-site materials
pH	6.0±1.0
Alkali content (as Na ₂ O)	≤5.0%
Density/g/cm ³	1.06±0.02
Chloride content	≤0.1%

Application Case

- Box Girder

A high-speed rail project employed ARIT early-strength polycarboxylate superplasticizer for C50 box girders, cutting tensioning time by four days and doubling mold-turnover efficiency.

- Precast Pipe Pile

A pipe-pile plant producing C105 precast piles on a pumping line adopted ART-JA. The mix exhibited excellent flowability and high compaction; once demolded, the surface was smooth and flawless. Strength developed uniformly, rising by roughly 50 % at demolding, and mold-turnover efficiency was markedly improved.

Usage Instructions

- The recommended effective solids content is 0.50 % – 2.00 % of the total cementitious materials; the exact dosage must be predetermined through trial tests according to the raw materials, job-site conditions, construction codes, and technical requirements.
- Any change in materials or environmental conditions may also cause the dosage to vary

within a certain range, so new tests are required to re-establish the optimum dosage.

Complies with the Following Standards

GB/T 8076 -2008

ASTM C494 TYPE E

EN934-2

Packaging

IBC Tank or Flexitank for customer demand

Storage

- It should be stored in a cool and dry place, avoiding direct sunlight, and kept in a dedicated warehouse or a fixed location.
- The effective storage period is 6 months. It can still be used after being tested and verified to be qualified if it exceeds the time limit.

Precautions

- When changing the type of cement or using newly delivered cement, a compatibility test should be conducted.
- Do not use in combination with naphthalene-based admixtures. When using in combination with other admixtures, compatibility tests should be performed.
- Strictly follow the construction specifications during application.
- The product information is only used to describe the product's characteristics and functions, and it is not a guarantee. Users are also required to carefully test the product's functions and its suitability. The functions and suitability of the product must be verified through testing conducted by qualified professionals.

Legal Notes

- Retaining or disclosing product samples without the company's explicit permission is strictly prohibited.
- In addition to the product quality itself, the actual performance also depends on other uncontrollable factors. If there are uncontrollable factors, company cannot guarantee the performance of the product.

- Users are requested to strictly follow the technical guidance and product instructions for use. The company shall not be liable for any consequences resulting from unauthorized changes to the product usage method without the company's authorization.